

(Amended) 15. A resistor array comprising:

a plurality of resistors each comprising a metallic bulk base;

5 a plurality of electrodes composed of conductive material
disposed directly on said metallic bulk base wherein said
metallic bulk base between every two of said electrodes
having a precisely controlled distance for providing a
precisely defined resistance for each of said resistors.

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(Amended) 16. The resistor array of claim 15 further comprising:

at least an electrode layer of said conductive material
disposed on each of said electrodes to form an electrode for
each of said electrode columns.

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(Amended) 17. The resistor array of claim 15 further comprising:

a plurality of scribing lines disposed between said resistors
for scribing said resistor array into a plurality of resistors
each comprising at least two electrodes.

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(Amended) 18. The resistor array of claim 15 wherein:

said metallic bulk base of said resistors composed of a
nickel-copper alloy.

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(Amended) 19. The resistor array of claim 15 wherein:

said electrodes further comprises a copper layer and a tin-lead alloy layer disposed on each of said electrode columns.

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(Amended) 20. The resistor array of claim 15 wherein:

said precisely defined resistance for each of said resistors ranging between one milli-ohm to one ohm.

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(Amended) 21. The resistor array of claim 15 wherein:

said metallic bulk base of each of said plurality of resistors having a thickness ranging between 0.05 to 0.5 millimeters and a length ranging between 1.0 to 7.0 millimeters.

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(Amended) 22. The resistor array of claim 15 wherein:

each of said plurality of electrodes disposed directly on said metallic bulk base having a width and length ranging between 0.1 to 3.2 millimeter, a height ranging between 0.05 to 0.5 millimeters and distance ranging between 0.4 to 6.2 millimeters between every two electrode columns.

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(Amended) 23. A resistor array comprising:

a plurality of resistors each comprising a metallic bulk base;

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a plurality of column-shaped electroplated electrodes
disposed directly on said metallic bulk base and having
precisely controlled distance between every two of said
electrodes for providing a precisely defined resistance for
each of said resistors.

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(Amended) 24. The resistor array of claim 23 further comprising:

a plurality of scribing lines disposed between said resistors
for scribing said resistor array into a plurality of resistors
each comprising at least two electrodes.

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(Amended) 25. The resistor array of claim 23 wherein:

said metallic bulk base of said resistors composed of a
nickel-copper alloy.

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(Amended) 26. The resistor array of claim 23 wherein:

said plurality of column-shaped electroplated electrodes
disposed directly on said metallic bulk base further
comprises a copper layer and a tin-lead alloy layer.

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(Amended) 27. The resistor array of claim 23 wherein:

said precisely defined resistance for each of said resistors
ranging between one milli-ohm to one ohm.

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(Amended) 28. The resistor array of claim 23 wherein:

said metallic bulk base of each of said plurality of resistors
having a thickness ranging between 0.05 to 0.5 millimeters
and a length ranging between 1.0 to 7.0 millimeters.

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(Amended) 29. The resistor array of claim 23 wherein:

each of said plurality of column-shaped electrodes disposed
directly on said metallic bulk base having a width and length
ranging between 0.1 to 3.2 millimeter, a height ranging between
0.05 to 0.5 millimeters and distance ranging between 0.4 to 6.2
millimeters between every two electrodes.

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(Amended) 30. A resistor comprising:

a metallic bulk base;

5 at least two electrodes composed of a conductive material
disposed directly on said metallic bulk base and having
precisely controlled distance between said two electrodes for
providing a precisely defined resistance for said resistor.

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10 (Amended) 31. The resistor of claim 26 further comprising:

at least an electrode layer of said conductive material
disposed on each of said electrodes to form an electrode for
each of said electrode columns.

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(Amended) 32. The resistor of claim 30 wherein:

said metallic bulk base composed of a nickel-copper alloy.

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(Amended) 33. The resistor of claim 30 wherein:

said electrodes further comprises a copper layer and a tin-
lead alloy layer disposed on each of said electrode columns.

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(Amended) 34. The resistor of claim 30 wherein:

said precisely defined resistance for said resistor ranging
between one milli-ohm to one ohm.

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(Amended) 35. The resistor of claim 30 wherein:

said metallic bulk base of said resistor having a thickness
ranging between 0.05 to 0.5 millimeters and a length ranging
between 1.0 to 7.0 millimeters.

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(Amended) 36. The resistor of claim 30 wherein:

each of said electrodes disposed directly on said metallic
bulk base having a width and length ranging between 0.1 to
3.2 millimeter, a height ranging between 0.05 to 0.5
millimeters and distance ranging between 0.4 to 6.2
millimeters between every two electrode columns.

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20 (Amended) 37. A resistor comprising:

a metallic bulk base;

a least two column-shaped electroplated electrodes disposed
directly on said metallic bulk base and having precisely
controlled distance between said electrodes for providing a
precisely defined resistance for said resistor.

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(Amended) 38. The resistor of claim 37 wherein:

said metallic bulk base of said resistor composed of a nickel-copper alloy.

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(Amended) 39. The resistor of claim 37 wherein:

said column-shaped electroplated electrodes disposed directly on said metallic bulk base further comprises a copper layer and a tin-lead alloy layer.

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(Amended) 40. The resistor of claim 37 wherein:

said precisely defined resistance for said resistor ranging between one milli-ohm to one ohm.

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(Amended) 41. The resistor of claim 37 wherein:

said metallic bulk base of said resistor having a thickness ranging between 0.05 to 0.5 millimeters and a length ranging between 1.0 to 7.0 millimeters.

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(Amended) 42. The resistor of claim 37 wherein:

each of said column-shaped electrodes disposed directly on said metallic bulk base having a width and length ranging between 0.1 to 3.2 millimeter, a height ranging between 0.05 to 0.5 millimeters and distance ranging between 0.4 to 6.2 millimeters between every two electrodes.

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